

- B^a
23. (New) The mounting socket of claim 1, wherein the terminals are adapted to accommodate for an uneven or warped substrate upon which the mounting socket is disposed.
24. (New) The mounting socket of claim 1, wherein the terminals are solderless.

REMARKS

Applicant has reviewed and considered the Office Action mailed on January 3, 2001, and the references cited therewith.

Claims 1, 4, 9, 11, 12, 17, 18 and 20-22 are amended, claims 2, 3, 8, 15 and 16 have been canceled, and proposed new claims 23 and 24 are added; as a result, claims 1, 4-7, 9-14 and 17-24 are now pending in this application.

Claim Objections

Claim 1 was objected to because of the following:

-at line 2, a comma “,” after the word “second” should be removed? Appropriate correction is required. Claim 1 was amended to address this objection.

Rejections Under 35 U.S.C. §112

Claims 1-22 were rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, has possession of the claimed invention. Applicant respectfully traverses the rejection.

Applicant respectfully submits that the feature “solderless terminal” is supported in Applicant’s specification; page 6, lines 14-16, page 7, lines 2-3, page 8, lines 14-19, page 9 throughout, among others. Applicant submits that the specification supports both solder and solderless terminals, without limitation thereof. For example, among others, the specification provides “[c]onventional SMT processes or non-solder socketable mounting solutions may each be employed with the socket package 100.” Page 7, lines 2-3. Also, “physical attachment of assembly 400 to BGA package 412 is accomplished with adhesive 402, and does not require a solder reflow process. LGA package 414 electrically attaches to assembly 400 via land 418 to

make an electrical connection between LGA package 414 and terminal 409. Physical attachment of assembly 400 to LGA package 414 is accomplished with adhesive 402, and does not require a solder reflow process". Page 8, lines 12-16.

Applicant respectfully submits that throughout the specification, "room temperature attachment" is presented. Page 8, line 19, for example, among others. It is understood that solder reflow is conducted at an elevated temperature and requires the solder to soften and flow. One advantage, among others, of the present invention, is that a low temperature processing apparatus and methods are presented to accommodate attachment of heat-sensitive electronic components.

Nonetheless, Applicant proposes that claims 1, 9, 11, 12, 20, 21 and 22 be amended withdrawing the feature "solderless". Applicant believes that "solderless" unnecessarily narrows the scope of the claimed invention.

Applicant respectfully submits that dependent claims 4-7, 10, 13, 14, 17 and 19 depend from independent base claims and repeats the foregoing discussion to support the patentability of claims 4-7, 10, 13, 14, 17 and 19. Claims 2, 3, 8, 15 and 16 have been canceled.

Reconsideration and allowance of claims 1, 4-7, 9-14 and 17-22 is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claims 1-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Allen et al. (U.S. Patent No. 4,705,205).

Claims 1-22

The office action rejected claims 1-22 based on the single reference, Allen et al. Applicant respectfully traverses the single reference rejection under 35 U.S.C. § 103 since not all of the recited elements of the claims are found in Allen et al. Since all the elements of the claim are not found in the reference, Applicant assumes that the Examiner is taking official notice of the missing elements. Applicant respectfully objects to the taking of Official Notice with a single reference obviousness rejection and, pursuant to M.P.E.P. § 706.02(a), Applicant respectfully traverses the assertion of Official Notice and requests that the Examiner cite references in support of this position.

Claims 1, 12, 18, 20, 21 and 22

Applicant proposes that claims 1, 12, 18, 20, 21 and 22 be amended to clarify the subject matter by including the features that the terminals comprise a coil and a conductive polymer, the terminals adapted to be elastically compressible and to exert a return force when compressed. Support can be found in the specification at page 4, line 22 through page 5 line 2, among others. Applicant respectfully submits that no new matter has been entered.

It is respectfully submitted that Applicant is unable to find the subject matter or a teaching of claims 1, 12, 18, 20, 21 and 22 in the Allen et al. reference. For example, among others, Applicant is unable to find in the Allen et al. reference an elastically compressible terminal. Further, Applicant is unable to find in Allen a terminal which comprises a coil and a conductive polymer, the terminal adapted to exert a return force when compressed.

The office action rejected claims 1-22 based on Allen et al. Applicant respectfully traverses the office action's assertions that the only difference between Allen et al. and the invention claim is that the claim comprises the solderless terminals in place of terminals (28) taught by Allen et al. Applicant respectfully submits that one does not obtain the subject matter of the above claims by simply replacing the Allen terminals (28) with solderless terminals.

In further consideration of claim 21, Applicant proposes that the claim be amended to include the feature of "interconnected planes" to clarify the subject matter. It is respectfully submitted that Applicant is unable to find the subject matter or a teaching of the method of claim 21 in the Allen et al. reference. In addition to the above discussion, for example, among others, Applicant is unable to find in the Allen et al. reference a method comprising compressing a plurality of elastically compressible terminals wherein each terminal is individually elastically compressible to contact its respective mounting area wherein the mounting areas are disposed on non-planar interconnected planes.

Entry of the proposed amendments and reconsideration and allowance of claims 1, 12, 18, 20, 21 and 22 is respectfully requested.

Claims 2 and 3

Claims 2 and 3 have been canceled.

Claim 4

Applicant respectfully traverses the rejection that it is obvious to substitute the spiral metal tape of Allen with conductive polymer and submits that a *prima facie* case of obviousness has not been made. The Examiner has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To do that the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id.* The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP § 2143. The Examiner must avoid hindsight. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990).

The rejection asserts that one of ordinary skill in the art could use a conductive polymer injected within the vias instead of using a spiral metal tape. The rejection cites Allen et al. col. 20, lines 19-21, "[f]or example, a spiral metal tape can be placed in the apertures of the retaining member then filled with molden (sic) solder, ..., then cooled." Applicant fails to see the teaching, suggestion, or motivation in Allen et al. nor to one of ordinary skill to substitute conductive polymer for metal tape. Further, Applicant respectfully submits that the office action fails to show that the proposed combination of conductive polymer filled with solder has a reasonable expectation of success.

Further, Applicant respectfully submits that dependent claim 4 is patentable as adding features to base claim 1, and repeats the foregoing discussion to support the patentability of claim 4.

Reconsideration and allowance of claim 4 is respectfully requested.

Claim 5

Applicant respectfully submits that dependent claim 5 is patentable as adding features to base claim 1, and repeats the foregoing discussion to support the patentability of claim 5.

Reconsideration and allowance of claim 5 is respectfully requested.

Claim 6

Applicant respectfully traverses the assertion made in the office action that the polymer tape in claim 6 is the same as the "retaining member" of the Allen reference. Applicant respectfully submits that the polymer tape of Applicant's claim 6 does not comprise vias as in the retaining member of Allen et al. Further, Applicant, in reviewing the citations (Figure 10, elements 40; col. 14, lines 4-15), is unable to find where the polymer tape is applied to the first adhesive layer, which in turn is applied to the first side of the socket body. It is respectfully submitted that Applicant is unable to find the subject matter or a teaching of claim 6 in the Allen et al. reference.

Further, the rejection asserts that "it is well known in the art to have a ground and power line circuit laid on the polymer tape ("retaining member") of the mounting socket ("chip carrier") so that the chip mounted on the socket ("carrier") can be active within the electronic system." Absent a cited reference, it appears that the Examiner is using personal knowledge, so the Examiner is respectfully requested to submit an affidavit as required by 37 C.F.R. § 1.104(d)(2) to support this assertion.

Further, Applicant respectfully submits that dependent claim 6 is patentable as adding features to base claim 1 and dependent claim 5, and repeats the foregoing discussion to support the patentability of claim 6.

Reconsideration and allowance of claim 6 is respectfully requested.

Claim 7

Applicant respectfully submits that dependent claim 7 is patentable as adding features to base claim 1 and dependent claim 5, and repeats the foregoing discussion to support the patentability of claim 7.

Reconsideration and allowance of claim 7 is respectfully requested.

Claim 8

Claim 8 has been canceled.

Claims 9 and 11

Applicant proposes that claims 9 and 11 be amended to clarify the subject matter to include the features that the contact terminals are adapted to be elastically compressible which comprises a coil and a conductive polymer, the terminals adapted to exert a return force when compressed. Support can be found in the specification at page 4, line 22-25, among others. Applicant respectfully submits that no new matter has been entered. It is respectfully submitted that Applicant is unable to find the subject matter or a teaching of the methods of claims 9 and 11 in the Allen et al. reference. For example, among others, Applicant is unable to find in the Allen et al. reference a method comprising compressing a plurality of elastically compressible terminals.

Reconsideration and allowance of claims 9 and 11 is respectfully requested.

Claim 10

Applicant respectfully submits that dependent claim 10 is patentable as adding features to base claim 9, and repeats the foregoing discussion to support the patentability of claim 10.

Reconsideration and allowance of claim 10 is respectfully requested.

Claim 13

Applicant respectfully traverses the assertion made in the office action that the first adhesive layer having openings to expose the lands as recited in claim 13 is the same as the orientation holes (col. 16, lines 61-67) of the Allen reference. Applicant, in reviewing the citations provided (36, 38, 39; Figs. 7, 9 & 10), is unable to find where the first adhesive layer has openings to expose the lands. It is respectfully submitted that Applicant is unable to find the subject matter or a teaching of claim 13 in the Allen et al. reference.

Further, Applicant respectfully submits that dependent claim 34 is patentable as adding features to base claim 12 and repeats the foregoing discussion to support the patentability of claim 13.

Reconsideration and allowance of claim 13 is respectfully requested.

Claim 14

Applicant respectfully submits that dependent claim 14 is patentable as adding features to base claim 12 and dependent claim 13, and repeats the foregoing discussion to support the patentability of claim 14.

Reconsideration and allowance of claim 14 is respectfully requested.

Claims 15 and 16

Claims 15 and 16 have been canceled.

Claim 17

Applicant respectfully submits that dependent claim 17 is patentable as adding features to base claim 12 and repeats the foregoing discussion to support the patentability of claim 17. The office action recognizes that claim 17 is similar to claim 4. Applicant respectfully submits that claim 17 is patentable under a similar rationale as claim 4.

Reconsideration and allowance of claim 17 is respectfully requested.

Claim 19

Applicant respectfully submits that dependent claim 19 is patentable as adding features to base claim 18, and repeats the foregoing discussion to support the patentability of claim 19.

Reconsideration and allowance of claim 19 is respectfully requested.

Entry of the proposed amendments and new claims, and reconsideration and allowance of claims 1, 4-7, 9-14 and 17-24, is respectfully requested.

Documents Cited but Not Relied upon for this Office Action

Applicant need not respond to the assertion of pertinence stated for the references cited but not relied upon by the Office Action since these references are not made part of the rejections in this Office Action. Applicant is expressly not admitting to this assertion and reserves the right to address the assertion should it form part of future rejections.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (612) 371-2157 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

KENZO ISHIDA ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.
P.O. Box 2938
Minneapolis, MN 55402
(612) 371-2157

Date 3/7/01

By



Paul J. Fordenbacher
Reg. No. 42,546

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Box AF, Commissioner of Patents, Washington, D.C. 20231, on this 7th day of March, 2001.

Name

Sarah L. Reinhard

Signature

Sarah L. Reinhard